

Attorney Docket No. 06618-733001
Serial No.: 09/994,907
Amendment dated February 3, 2004
Reply to Office Action dated November 3, 2003

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently amended) A fuel cell, comprising:

a plurality of electrochemical cells, each including a plurality of electrodes, associated with the electrochemical cells including an electrochemical anode, an electrochemical cathode and a membrane, said plurality of electrochemical cells arranged in series such that current flows across said membranes; and

a plurality of interconnects, between two adjacent electrodes, and wherein each interconnect is at least 20 percent of an area of at least one of said electrodes;

a methanol feed part that feeds methanol to said plurality of electrochemical cells; and

wherein said cells are rectangular with flat faces facing against one another, and edge portions between the faces, and said edge portions extremely substantially perpendicular to said face, said methanol feed part is a wicking part which feeds methanol to only said edge portion of said membranes of said electrochemical cells.

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2-3. (Cancelled)

4. (Previously presented) A fuel cell as in claim 1, wherein said membranes are formed of a planar structure, and said interconnects are also formed of planar structures of substantially the same size as said electrochemical cells.

5. (Currently amended) A fuel cell, comprising:
a plurality of membrane assemblies, arranged substantially adjacent to one another, each membrane assembly being electrochemically active to produce a voltage when an electrochemical reaction occurs;

a plurality of electrodes, in contact with said membrane assemblies; and

a plurality of interconnects, located between adjacent ones of said electrodes, wherein a ratio of an area of an interconnect to an area of the electrode is at least 0.2; a methanol feed part that feeds methanol to said plurality of membrane assemblies; and

wherein said membrane assemblies are rectangular with flat faces facing against one another, and edge portions between the faces, and said edge portions extremely substantially perpendicular to said face, said methanol feed part is a wicking

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part which feeds methanol to only said edge portion of
membranes within said membrane assemblies.

6. (Original) A fuel cell as in claim 5, wherein said ratio is substantially 0.2.

7. (Original) A fuel cell as in claim 5, wherein said interconnects are formed of a paste.

8. (Original) A fuel cell as in claim 7, wherein said paste includes graphite therein.

9. (Original) A fuel cell as in claim 7, wherein said paste includes graphite herein and a heat curing binder.

10-13. (Canceled)

14. (Previously presented) A fuel cell as in claim 1, wherein said electrochemical cells are arranged such that an anode of one of said electrochemical cells contacts a cathode of another of said electrochemical cells.

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15. (Previously presented) A fuel cell as in claim 14, wherein said electrochemical cells produce a current which travels along a length of the cell.

16. (Previously presented) A fuel cell as in claim 14, wherein said electrochemical cells produce a current which travels along a width of the cell.

17. (Previously presented) A fuel cell as in claim 5, wherein said membrane assemblies each include an anode part, a cathode part, and a membrane part, between said anode and cathode.

18. (Currently amended) A fuel cell as in claim 17, wherein said membrane assemblies produce a voltage ~~which travels~~ along a length of the membrane assemblies.

19. (Currently amended) A fuel cell as in claim 17, wherein said membrane assemblies produce a voltage ~~which travels~~ along a width of the membrane assemblies.

20. (Previously presented) A method of forming a fuel cell as in claim 5, comprising:

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forming a plurality of assemblies which are substantially adjacent with one another;

coating said membranes with a catalyst layer coating;

forming interconnects of a paste with a heat curing binder therein, between electrodes associated with said membranes; and

hot pressing, wherein said heat curing binder is heated during said hot pressing said electrodes to form a membrane electrode assembly.